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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,327	10/31/2003	Cameron Beccario	MSFT-2768/305786.01	2566
41505 7590 12/19/2006 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER VO, TED T	
			ART UNIT	PAPER NUMBER
			2191	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/699,327	<b>Applicant(s)</b> BECCARIO ET AL.	
	<b>Examiner</b> Ted T. Vo	<b>Art Unit</b> 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/31/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/18/04</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This action is in response to the communication filed on 10/31/2003.  
Claims 1-27 are pending in the application.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. The claims 1-27 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1: Claim 1 recites a method in which it solely recites a determination on a set. The method as a whole is merely **to resolve a mathematical algorithm** (*resolving a target expression*) within a set, where the set contains elements (*types*). The determination of the set is on its element targets (*target type*) based on whether the set is empty or not (*if said first set is not empty; if said first set is empty*). The method fails to produce a practical, concrete, and tangible result. There is nothing to show a physical transform to out side of a computer activity. The claim's scope as a whole is merely to resolve a mathematic algorithm. Thus, Applicants is clamming mathematics per se. Accordingly, it is an abstract idea and is not statutory claim.

The limitations such as "*where said first set of types comprises all resulting types of all first variant expressions, where each of said first variant expressions comprises said target expression with at least one of said operands replaced by widening type conversion*", and

Art Unit: 2191

*"where said second set of types comprises all resulting types of all second variant expressions, where each of said second variant expressions comprises said target expression with at least one of said operands replaced by type conversion", are only descriptive materials.*

As per claims 2-7: Claims 2-7 are merely manipulating the elements within said set (type) including calculations per se. The claims fail to remedy the deficiencies of independent claim 1.

As per Claim 8: Claims 8 merely recites a mathematic algorithm as in the same manner in the claim 1, where claim 8, includes more than a set (*second set of types, third set of types*).

As per Claim 9: Claim 9 remains manipulating the elements within the three sets (types) including calculations per se. The claim fails to remedy the deficiencies of independent claim 8.

As per Claims 10-16: Claims 10-16 merely recite a computer-readable medium that stores a manipulation of a mathematic algorithm as described in Claims 1-7. Such a medium fails to meet the claimed statutory because the medium remains manipulating a mathematic algorithm; i.e. even included with a medium, it is only claiming mathematics per se.

As per Claims 17-18: Refer to the rationale as addressed top Claims 10-16. Claims 17-18 is merely a mathematic algorithm enclosed in a medium.

Claims 19-25: Refer to the rationale as addressed top Claims 1-7. Claims 19-25 is merely manipulating a mathematic algorithm. As a whole, the claims are only mathematic per se.

Claims 26-27: Claims 26-27 is merely manipulating a mathematic algorithm. As a whole, the claims are only mathematics per se.

As per Claims 10-18: As in the specification, a medium includes,

"By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media. Combinations of any of the above should also be included within the scope of computer readable media".

Claims 10-18 claim computer readable media that include wireless as in the specification, i.e. the media include air or a form of energy. These types of media are neither concrete nor tangible. Therefore, if claims produce a result, this result in these media cannot be concrete and tangible. The claims fail to meet the statutory claims.

**Conclusion**


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTV  
December 08, 2006

  
**TED VO  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100**